

REMARKS

The Official Action mailed 12 February 2009, has been received and its contents carefully noted. The pending claims, claims 1-5 and 9-14, were rejected. By this amendment, claim 1 has been amended and claims 2-8 and 12-14 have been canceled. Support may be found in the specification and the claims as originally filed. No statutory new matter has been added. Therefore, reconsideration and entry of the claims as amended are respectfully requested.

Objection to the Specification

The Examiner objected to the specification because on page 4, in the formula (I), the groups E and M are not shown.

Applicants respectfully submit that the specification as amended obviates the objection. Applicants respectfully submit that the groups E and M, as referenced by the Examiner are in reference to E and M provided in Table 1, instead of the structural formula. In order to prevent confusion with the isomer designation, "E" in the table has been changed to --P-- and the paragraph prior to Table 1 has been amended to indicate that P and M are with respect to that provided in Table 1. Therefore, the objection to the specification should be withdrawn.

Rejection under 35 U.S.C. 102(b)

The Examiner rejected claims 1 and 2 under 35 U.S.C. 102(b) as being anticipated by Hayase (JP 04182461 A).

Applicants respectfully submit that Hayase does not anticipate the present invention, as claimed, because according to instant claim 1, A is CH, R₄ is methyl or n-butyl, and R₅ is methyl. According to the compound of Hayase, A is N, R₄ and R₅ are hydrogen. Thus, Hayase does not teach or suggest the present invention as claimed.

Therefore, the rejection under 35 U.S.C. 102(b) should properly be withdrawn.

Rejection under 35 U.S.C. 103(a)

The Examiner maintained the rejection of claims 1-5 and 9-14 under 35 U.S.C. 103(a) as being unpatentable over Hayase in view of O'Mahony (US 6,034,121) and Fischer (US

6,906,007). Specifically, the Examiner stated that all of the elements as (previously) claimed were known in the prior art and one skilled in the art would have combined the elements where there is no change in their respective functions and the results would have been predictable. The Examiner stated that absent a showing of criticality, merely modifying a known compound to obtain an analogous compound is not a patentable invention.

Applicants respectfully submit that the compound according to the present invention as set forth in claim 1 is unobvious as it provides significantly better fungicidal activity which is unexpected.

As stated by the Examiner, it would have been obvious to combine the elements of the prior art in order to arrive at a claimed invention where there is no change in the respective functions of the elements and the results would have been predictable. However, as set forth in Table A below (and the specification of the present invention), a compound according to instant claims, provides 100% fungal control against cucumber downy mildew at 50 ppm, whereas the closest prior art compound, Compound 51 of Hayase, provides a mere 20%.

Table A. Comparison of fungicidal activity against cucumber downy mildew (50 ppm)

Compound	5	402	JP51
control (%)	100	100	20

The critical features (substituents) of the compounds of the present invention are as follows: A is CH, R₄ is methyl or n-butyl, and R₅ is methyl. These critical features provide the 100% fungal control against cucumber downy mildew.

One of ordinary skill in the art would not have expected that modifying Compound 51 to be a compound according to the instant claims (Compound 5 or Compound 402), i.e. such that A is CH, R₄ is methyl or n-butyl, and R₅ is methyl, would provide a 5-fold improvement in control. Instead, as explained by the Examiner, one would expect about the same activity as Compound 51, i.e. about 20% control. Clearly, a 5-fold improvement is a substantial and unexpected improvement.

Nowhere do the cited documents teach or suggest that simply modifying Compound 51 such that A is CH, R₄ is methyl or n-butyl, and R₅ is methyl (according to the instant claims)

would provide a 5-fold improvement in fungal control. Thus, one of ordinary skill in the art would not have a reasonable expectation of success that a 5-fold improvement in activity could be obtained by simply changing a nitrogen to CH (for A), a hydrogen to methyl or n-butyl (for R₄), and a hydrogen to methyl (for R₅).

Although O'Mahony generically discloses that the substituents of coumarine compounds can be substituted with various functional groups, O'Mahony does not teach or suggest that making the following specific changes to Compound 51: nitrogen to CH (for A), a hydrogen to methyl or n-butyl (for R₄), and a hydrogen to methyl (for R₅) will result in a 5-fold improvement in fungal control.

Fisher does not alleviate the deficiencies of Hayase and O'Mahony. Specifically, the compounds of Fisher do not contain any coumarin moiety and the Fisher disclosure is concerned with insecticidal activity instead of fungicidal activity. Nowhere does Fischer teach or suggest that making the following specific changes to Compound 51: nitrogen to CH (for A), a hydrogen to methyl or n-butyl (for R₄), and a hydrogen to methyl (for R₅) will result in a 5-fold improvement in fungal control.

Nowhere do the cited documents, alone or in combination, teach or suggest modifying Compound 51 to have the critical features the claimed invention, i.e. structural formula (I) where A is CH, R₄ is methyl or n-butyl, and R₅ is methyl. Nowhere do the cited documents, alone or in combination, teach or suggest the criticality of these features, as claimed, in providing a 5-fold increase in fungal control. Since the cited documents do not teach or suggest making the following specific changes to Compound 51: nitrogen to CH (for A), a hydrogen to methyl or n-butyl (for R₄), and a hydrogen to methyl (for R₅), the claimed invention is novel and unobvious. See *Takeda Chemical Industries, Ltd. v. Alphapharm Pty., Ltd.*, No. 06-1329 (Fed. Cir. 2007). Applicants respectfully submit that a *prima facie* case of obviousness of the claimed compound has not been established.

Therefore, the rejection under 35 U.S.C. 103(a) should properly be withdrawn.

Request for Interview

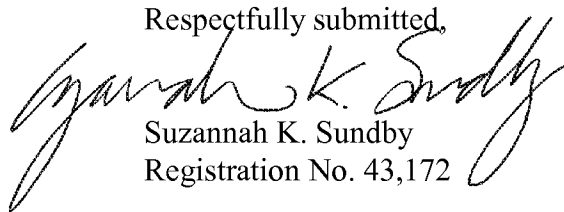
Applicants appreciate the Examiner taking the time to discuss the present invention over the telephone on 26 November 2008. Applicants also appreciate the Examiner's promise that he will contact the undersigned in order to arrange an interview prior to issuing another Office Action.

CONCLUSION

All of the stated grounds of objection and rejection have been properly traversed, accommodated, or rendered moot. Therefore, it is respectfully requested that the Examiner reconsider all presently outstanding objections and rejections and that they be withdrawn. It is believed that a full and complete response has been made to the outstanding Official action and, as such, the present application is in condition for allowance. If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at the number provided.

It is not believed that extensions of time are required, beyond those that may otherwise be provided for in accompanying documents. However, in the event that additional extensions of time are necessary to prevent abandonment of this application, then such extensions of time are hereby petitioned under 37 C.F.R. 1.136(a), and any fees required therefor are hereby authorized to be charged to **Deposit Account No. 02-4300**, Attorney Docket No. **034226.002**.

Respectfully submitted,



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